DOCUMENT RESUME

ED 116 793 PS 008 247

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TITLE Cognitive Factors in Delay of Gratification.
PUB DATE Apr 75
NOTE 6p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Denver, Colorado, April 10-13, 1975)

EDRS PRICE MF-$0.76 HC-$1.58 Plus Postage
DESCRIPTORS *Cognitive Processes; Pictorial Stimuli; *Preschool Education; Reinforcement; *Rewards; *Self Control; *Stimulus Behavior; Visual Perception; Visual Stimuli
IDENTIFIERS *Delay of Gratification

ABSTRACT

The major objective of this study was to explore how preschool children's ability to delay gratification was affected when children were asked to attend to actual rewards rather than pictures of rewards. Sixty subjects, 3 to 5 years of age, were given a choice between two rewards and then placed in a delay of gratification situation. Half of the subjects were left in the waiting situation with the real reward present, and the other half had a realistic picture of the reward in front of them. Subjects were either instructed to pretend that the real or pictured reward was real, to pretend that the real or pictured reward was pictured, or the subject was not given any additional instructions. Results showed that having the actual reward object in front of the subject presented as real led to low delay of gratification and pictures of the reward, presented as pictures, facilitated delay. However, these effects were reversed by instructing the child to construe the actual object as pictured, and the pictured object as real. (BRT)

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ED116793

Presented at SRCD Meetings, Denver, April, 1975

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Cognitive Factors in Delay of Gratification

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PS 008247

It is widely asserted that how we perceive a stimulus critically determines our behavior in relation to that stimulus. However, there have been surprisingly few empirical demonstrations of this basic proposition. Recent studies of preschool children's delay of gratification investigated how a particular m ner in which a child focuses on the desired outcome influences his ability to delay gratification. Specifically, it was found that when the child attends to the actual rewards for which he is waiting in a delay of gratification situation, his ability to wait for it is greatly reduced (Mischel & Ebbesen, 1970; Mischel, Ebbesen & Zeiss, 1972). In direct contrast to these negative effects of attention to the actual rewards, attention to their representations as pictures during the waiting period dramatically facilitates delay of gratification (Mischel and Moore, 1973). The total findings suggest that the manner in which the reward objects are construed may be a potent determinant of self-control.

The present study was designed to replicate the observed effects on delay of gratification of attending to actual rewards as opposed to pictures of them during the waiting period. More important, it tested the proposition

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that the effects of the reward objects could be altered predictably through cognitive transformations. That is, we hypothesized that when children are taught to "pretend" that the real rewards in the waiting situation are pictures of the rewards and, conversely, that pictures of the reward objects are real, the impact of those objects on delay can be altered and indeed systematically reversed in line with their cognitive representations rather than their objective stimulus qualities. Specifically, we predicted that regardless of the actual objects facing the child, if the rewards are cognitively represented as real, delay would be short; if they are imagined as pictures, delay would be longer.

Method

Sixty preschool children were assigned randomly to one of six conditions in a 3 x 2 design. They ranged in age from 3 years 6 months to 5 years 2 months. Mean age was approximately equal across conditions. Equal numbers of males and females were assigned to each condition. Children were given a choice between two rewards and then placed in a delay of gratification situation described elsewhere (Mischel and Ebbesen, 1970). Half of the subjects were left in the waiting situation with the real rewards present; the other half had a realistic picture of the rewards in front of them. All subjects were given one of three instructional sets. One condition consisted of instructions to the child to pretend that the reward objects (real or picture) in front of him were pictures. The second condition was one in which the child was instructed to pretend that the reward objects (real or picture) in front of him were real. The third condition received no additional instructions.

Results and Discussion

The results (summarized in Table 1) offered strong support for the contention that the effects on children's waiting behavior of a particular reward stimulus may be dramatically and predictably altered by the manner in which the

child construes that stimulus. Specifically, when the instructional set is congruent with the rewards present in the situation, the previously observed effect is found: having the actual reward objects in front of the child and

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Insert Table 1 about here

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representing it cognitively as real leads to low delay of gratification; in contrast, the presence of pictures of the rewards, when these are represented cognitively as pictures, facilitates delay. However, these effects may be not only wiped out but actually reversed by giving a simple instructional set designed to alter the way in which the child construes the rewards. When the child has the real rewards in front of him but pretends that they are pictures, long delay times are found. Conversely, when the child has a picture of the rewards in front of him but pretends that they are real, relatively short delay is found.* Thus, the cognitive representations outweigh the effects of the actual stimuli facing the child.

These results are important in two ways: 1) they demonstrate the critical role of cognitive operations in delay of gratification, 2) they show specifically that the effects of having relevant real rewards or pictures of the rewards facing the child during delay can be systematically reversed by cognitive transformations through which the real objects are imagined as pictorial representations and vice versa.

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* To ensure that the effects obtained were a function of cognitive operations on the rewards for which the child was waiting rather than an artifact of the instructional set (e.g., it might be more fun to pretend that things are pictures rather than to pretend they are real) an additional four cells were run in which the child had objects in front of him that were irrelevant to the waiting situation (e.g., the child chose between marshmallows and a pretzel but had mints and a graham cracker in front of him during the waiting period) when the "pretend real" and "pretend picture" instructions were given. No differences were found among the groups.

Table 1

Effects of Cognitive Representations
and of Actual Rewards Present
on Voluntary Delay Time (Minutes)

		Cognitive Representation of Rewards ("Pretend" Instructions)	
		Picture	Real
Rewards Present in Situation	Picture	17.75	5.95
	Real	17.70	7.91
	None	15.61	12.24

Note: Maximum possible delay is 20 minutes.

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